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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,346	01/23/2004	Eric S. Olson	TCOM0018	7083
39258	7590	12/22/2005	EXAMINER	
TENSORCOMM, INC. 1490 W. 121ST AVE., SUITE 105 WESTMINISTER, CO 80234			TRAN, KHA1	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/763,346

Applicant(s)

OLSON ET AL.

Examiner

KHAI TRAN

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 and 32-41 is/are allowed.
- 6) ☒ Claim(s) 16 and 24 is/are rejected.
- 7) ☒ Claim(s) 17-23 and 25-31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6 sheets</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 16, 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Bottomley (U.S. Pat. 5,615,209) cited by Applicant.

Regarding claim 16, Bottomley discloses a method of decreasing interference in a coded signal as shown in Figure 1, comprising: generating a first vector (10) from the interference; and using the first vector (10) to project the coded signal substantially orthogonal (16) to the interference to decrease the interference, wherein the first vector comprises a plurality of elements with each element representing a component of the interference (col. 4, line 57 to col. 5, line 16).

Claim 24 is similar to claim 16. Therefore, claim 24 is rejected under a similar rationale.

### ***Allowable Subject Matter***

3. Claims 1-15, 32-36, and 37-41 are allowed.

4. Claims 17-23, 25-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: none of the prior art of the record discloses or suggests a system for decreasing interference in a coded signal, comprising: a matrix generator communicatively coupled to the interference selector and configured for generating a matrix from the selected the interference, wherein the matrix comprises a plurality of vectors; and a processor configured for using the matrix to project the coded signal substantially orthogonal to the interference to decrease the interference, wherein at least one of the vectors comprises a plurality of elements with each element representing a component of the interference.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Thomas et al (US 2005/00311060 A1) disclose an interference matrix construction.

Foschini et al (U.S. Pat. 6,317,466) disclose a wireless communication system.

Shanbhag (US 2002/0012386 A1) discloses binary Quasi-orthogonal vectors.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAIR TRAN whose telephone number is (571) 272-3019. The examiner can normally be reached on 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JAY PATEL can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KHAI TRAN  
Primary Examiner  
Art Unit 2637

**KT**  
**December 20, 2005**